(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 10 February 2005 (10.02.2005)

PCT

(10) International Publication Number WO 2005/012600 A1

(51) International Patent Classification⁷: C25F 7/00, H01L 21/304, 21/306

(21) International Application Number:

PCT/JP2004/011100

(22) International Filing Date: 28 July 2004 (28.07:2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2003-206147 2004-082863

5 August 2003 (05.08.2003) JP 22 March 2004 (22.03.2004) JP

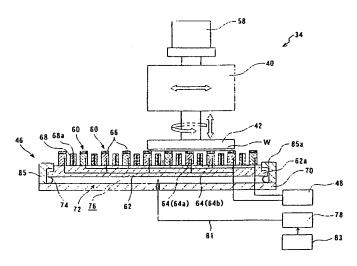
- (71) Applicant (for all designated States except US): EBARA CORPORATION [JP/JP]; 11-1, Haneda Asahi-cho, Ohta-ku, Tokyo, 1448510 (JP).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): YASUDA, Hozumi [JP/JP]; c/o Ebara Corporation, 11-1, Haneda Asahi-cho, Ohta-ku, Tokyo, 1448510 (JP). NOJI, Ikutaro [JP/JP]; c/o Ebara Corporation, 11-1, Haneda Asahi-cho, Ohta-ku, Tokyo, 1448510 (JP). HIROKAWA, Kazuto [JP/JP]; c/o Ebara Corporation, 11-1, Haneda Asahi-cho, Ohta-ku, Tokyo, 1448510 (JP). HZUMI, Takeshi [JP/JP]; c/o

Ebara Corporation, 11-1, Haneda Asahi-cho, Ohta-ku, Tokyo, 1448510 (JP). KOBATA, Itsuki [JP/JP]; c/o Ebara Corporation, 11-1, Haneda Asahi-cho, Ohta-ku, Tokyo, 1448510 (JP).

- (74) Agents: WATANABE, Isamu et al.; GOWA Nishi-Shin-juku 4F, 5-8, Nishi-Shinjuku 7-chome, Shinjuku-ku, Tokyo, 1600023 (JP).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: ELECTROLYTIC PROCESSING APPARATUS AND ELECTROLYTIC PROCESSING METHOD



(57) Abstract: The present invention provides an electrolytic processing apparatus and an electrolytic processing method which can perform processing of a substrate without destroying devices formed in the substrate even when a fragile mateiral is employed in the substrate and which can reduce non-uniformity in the contact pressure of an electrode member on a substrate during processing, thereby equalizing the processing amount in the entire processing surface of the substrate and the surface roughness after processing. The electrolytic processing apparatus includes: a substrate holder for holding a substrate; an electrode base provided with an electrode member for contact with the substrate, held by the substrate holder, in the presence of a liquid to effect processing of the substrate; and a support base for floatingly supporting the electrode base by a floating mechanism.



WO 2005/012600 A1



Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.